NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FEED MANAGEMENT

(No. of Systems and AUs Affected)

CODE 592

DEFINITION

Managing the quantity of available nutrients fed to livestock and poultry for their intended purpose.

PURPOSE

- Supply the quantity of available nutrients required by livestock for maintenance, production, performance, and reproduction; while reducing the quantity of nutrients, especially nitrogen and phosphorus, excreted in manure by minimizing the over-feeding of these and other nutrients.
- Improve net farm income by feeding nutrients more efficiently.

CONDITIONS WHERE PRACTICE APPLIES

Confined livestock operations with a whole farm nutrient imbalance

Confined livestock and poultry operations that have a significant build up of nutrients in the soil due to land application of manure

Confined livestock and poultry operations that land apply manure and do not have a land base large enough to allow nutrients to be applied at rates recommended by soil test and utilized by crops in the rotation.

Livestock operations seeking to enhance nutrient efficiencies

CRITERIA

General Criteria Applicable to All Purposes

The diets for specific species of animals shall be developed in accordance recommendations from:

- Nutritional Balance Analyzer (NUT-BAL) Software (dairy heifers/beef cattle).

OR

- Standards developed by the professional livestock nutritionists.

Laboratory analysis for NUT-BAL shall be done on the formulated diet, or on the feed ingredients used to formulate the diet, to determine its nutrient content using Texas A&M University Grazing Animal Nutrition Lab.

Data from analyzed feed ingredients and/or appropriate historic feed analysis information for the operation will be used for adjustments of ration formulation.

Diets and feed management strategies shall be developed by professional animal scientists, Individuals competent in use of NUT-BAL, independent professional nutritionists or other comparably qualified individuals.

Diets shall be formulated to provide the quantities and correct relative ratios of available nutrients required by the animal species to meet the goals for which the plan is being developed.

Adjustments to nutrient levels shall be provided to meet specific genetic potential,

environmental demands, and/or requirements to insure health, well-being and productivity.

One or more of the following feed management practices and/or diet manipulation technologies shall be used to reduce N, P and other excreted nutrients while maintaining the health, well-being and productivity of the animal.

- Formulating diets closer to animal requirements.
- Manipulating the crude protein and energy (carbohydrate and fat) content of the diet to enhance the availability of amino acids (ruminants).
- Using highly digestible feeds, as appropriate, in the diet.
- Using phytase and reducing the supplemental phosphorus content of the diet (non-ruminants)
- Reducing the phosphorus content of the diet of ruminants when it is being overfed.
- Using selected enzymes or other products to enhance feed digestibility or feed use efficiency.
- Using growth promotants as allowed by law.
- Implementing phase feeding for lactating dairy.
- Implementing split-sex feeding.

When analysis of manure will be done to determine manure nutrient content for NUT-BAL, the analysis shall be performed by laboratories whose results are accepted by Texas A&M University. Certified laboratories are acceptable for all other manure analysis.

CONSIDERATIONS

Consider nutrient requirements for production based upon stage of growth, intended purpose of the animal and the type of production involved.

Use management practices described in the NRCS Nutrient Management (Feed Management) Technical Notes for the specific animal species.

Analyzing the drinking water consumed by the animals to determine its nutrient content, and adjusting the diet to account for this source of nutrients.

Different feed ingredients (e.g. by- products) and their potential impacts on the nutrient content of excreted manure.

The potential impact of feed management on the volume of manure excreted and on manure storage requirements.

The impact of feed management practices, animal management practices, and diet manipulation on manure odors, pathogens, animal health and well-being.

Using concentrates and forages grown on the farm to minimize the quantity of nutrients imported to the farm, and to maximize the recycling of nutrients on the farm.

Analyzing excreted manure or manure from storage facilities to determine manure nutrient content and to estimate the impact of the feeding strategy.

PLANS AND SPECIFICATIONS

Plans and specifications for feed management shall be in keeping with the requirements of this standard. They shall describe the specific feed management practices and/or technologies that are planned for the operation.

The following components **shall be** included in the feed management plan:

- Feed analyses and ration formulation information prior to and after implementation of feed management on the operation.
- The estimated, or measured, nutrient content of the manure prior to the implementation of feed management on the operation.
- Guidance for how often the feed management plan shall be reviewed and potentially revised (including O&M).
- The quantities and sources of feed/forages that will be fed.

- Identification of the qualified feed management specialist who developed the plan.
- Copy of final Nut-Bal Report (if applicable)

OPERATION AND MAINTENANCE

The producer/client is responsible for the operation and maintenance of the feed management plan. Operation and maintenance activities address the following:

- Periodic plan review to determine if adjustments or modifications are needed.
- Routine feed analysis to document the rates at which nutrients were actually fed. When actual rates fed differ from or exceed the planned rates, records will indicate the reasons for the differences.
- Maintaining records to document plan implementation. As applicable, records include:
  - ♦ Records of feed analysis and ration formulation, including the record of ration formulation used prior to implementing the feeding strategy.
  - ♦ Records of the initial estimate of the impact the feeding strategy was expected to have on reducing manure nutrient content.
  - ♦ Records of any manure analysis that was done after the feeding strategy was implemented to determine manure nutrient content.
  - ♦ Dates of review and person performing the review, and any recommendations that resulted from the review.

Records of plan implementation shall be maintained for three years, or longer if required by contract.